

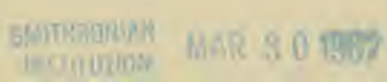
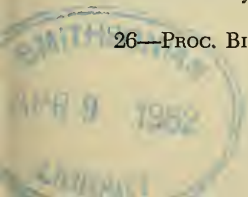
PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ON THE NAME OF THE MIGRATORY GRASSHOPPER
OF THE UNITED STATES AND CANADA, *MELANO-
PLUS SANGUINIPES* (F.) (ORTHOPTERA, ACRIDIDAE)

BY ASHLEY B. GURNEY

*Entomology Research Division, Agricultural Research Service
U. S. Department of Agriculture, Washington, D. C.*

Regretfully, I offer this note to explain another change in the scientific name of the migratory grasshopper, which for many years was known as *Melanoplus atlanis* (Riley), then from about 1917 to 1958 mainly as *M. mexicanus* (Sauss.), and since 1958 as *M. bilituratus* (Walker). *M. atlanis* is a synonym of *sanguinipes*, but *M. mexicanus* is a distinct species occurring chiefly in temperate Mexico; it is known in the United States only from two localities in western Texas. *M. bilituratus*, which dates from 1870, falls as a synonym of *Melanoplus sanguinipes* (Fabricius) 1798 (Supplementum Entomologiae Systematicae, p. 195). The name *M. bilituratus* had occasional use in American literature during the past 50 years, but not general use until adopted by Brooks 1958 (Can. Ent. 90, suppl. 9, p. 20), and later by Gurney and Brooks 1959 (Proc. U. S. Nat. Mus. 110, pp. 1-93) in their revision of the Mexicanus Group of *Melanoplus*. Due to the synonymy of *bilituratus*, the subspecies of this grasshopper recognized in the 1959 revision now are: *Melanoplus sanguinipes sanguinipes* (F.), widespread across Canada and the Northern States; *M. sanguinipes vulturinus* G. and B., in the southeastern part of the United States; and *M. sanguinipes defectus* Scudd., of the Southwest. Deep appreciation is expressed to Dr. T. H. Hubbell, of the University of Michigan, who informed me that he saw a Fabrician type of the Mexicanus Group at Copenhagen during a 1960 European visit. Dr. S. L. Tuxen, of the Zoologisk Museum, Copenhagen, graciously allowed me to borrow the type and to relax and study the concealed



genitalia, and he also gave background information on this specimen following painstaking efforts to trace its source.

The original description of *Gryllus sanguinipes* F. was brief and insufficient for determining which modern genus it represents, as well as quite inadequate for the recognition of a species. The only other mention of that name which has come to my attention was its listing, with species misspelled *sanguineipes*, by Scudder 1901 (Alphabetical Index to North American Orthoptera, p. 128). Thus, the obscurity surrounding the Fabrician name has been almost complete. This name should not be confused with the manuscript name *Pezotettix sanguinipes* Bruner (Publ. Nebr. Acad. Sci. 3, p. 27, 1893), which Scudder 1897 (Revision of . . . Melanopli . . . , Proc. U. S. Nat. Mus. 20, p. 236) considered applicable to *Melanoplus altitudinum* (Scudd.), but instead applies to *M. dodgei* (Thos.).

The type specimen of *M. sanguinipes* (F.), which I examined in June 1961, is in comparatively good condition. Except for the left hind leg which is gone, and the right hind leg and part of an antenna mounted on an attached card, appendages are present on the specimen. The colors of the hind leg seem well-preserved; the tibia is orange, and dark transverse bars show on the femur. The aedeagus, extracted and now attached to the abdomen in a dry condition, is typical of *M. bilituratus bilituratus* as figured and described by Gurney and Brooks (loc. cit.). The aedeagus has no carina on the lateral surface of the dorsal valve such as occurs in *M. bilituratus vulturinus*, and the specimen agrees well with those from New England and nearby.

The pin bearing the type specimen has three labels: 1. A tiny pale green square; 2. A red label "Type" in longhand; 3. A white, narrowly black-bordered label in longhand

"Am. sept.

Rohr

Mus. S. & T. L.

Gr. sangui-
nipes F."

The third line indicates that the specimen was in the collection of Sehestedt and Tønder Lund. They were pupils of Fabricius,

who stated in his autobiography (translated into English by Hope [Trans. Ent. Soc. London 4, pp. i-xvi, 1845], but also consulted in the original for me by Dr. Tuxen) that he often visited Copenhagen (from Kiel) to study the specimens of Sehestedt and Lund. The report on numerous specimens from Sehestedt and Lund in the 1787 "Mantissa Insectorum" shows that he had access to their material at least from this time. Dr. Tuxen has written me that there may have been a specimen in Fabricius' own collection, but there is none now. He regards the specimen here discussed as having been seen by Fabricius and to be available for type consideration. I therefore designate this specimen, already safely returned to the Zoologisk Museum in Copenhagen, as lectotype of *Melanoplus sanguinipes* (F.).

Concern about the precise geographic origin of the lectotype involves the travels of the collector, Rohr, but unfortunately the available information is indefinite. Julius Philip Benjamin von Rohr was briefly treated biographically in 1923 (Ent. Meddel. 15, pp. 125-126). He was born about 1735 and became one of Fabricius' important collectors until lost at sea in 1792. He spent much time between 1757 and 1792 in the Danish West Indies, especially at St. Croix, but traveled widely on other West Indian islands, and did much collecting at Cayenne.

Rohr was detailed to make a special study of the cotton plant, which resulted in his book "Anmerkungen über den Cattunbau," first part 1791, second part 1793. The foreword of the first part by a Kiel professor, P. G. Hensler, explains that in 1784-85 Rohr made a trip among the West Indian islands and to the mainland; however, except for Central American localities no mention of his having been on the North American mainland has been found in the book. It is stated, also by Hensler, in the foreword to the second part, which foreword probably was prepared before Rohr's death though published afterward, that Rohr was going to go by way of Rhode Island to London, then to Guinea (in Africa). Whether he may have visited Rhode Island and collected specimens which were sent to Fabricius prior to the loss of the ship going to Guinea is not clear. In any case, he may

have visited the United States earlier during his approximately 35 years residence in the West Indies.

The original description of *M. sanguinipes* (F.) gives "America boreali" as the type locality, though the rewritten label on the lectotype specimen reads "Am. sept." Dr. Tuxen reports that it is not rare to find the locality "America boreali" in Fabricius' book, but "Am. sept." on the rewritten labels, and he does not attach importance to the variation. At any rate, Fabricius' 1798 work includes descriptions of more than a dozen insect species from "America boreali" collected by Rohr, as well as others from "America meridionali," "Americae meridionalis Insulis," "Americae Insulis," and elsewhere by the same collector. Insofar as I have been able to check the distribution of the Fabrician species from "America boreali," hoping for indications of the limits of the area where Rohr probably collected them, these species are widely distributed insects of the eastern United States, with several occurring from southeastern Canada to Texas. No clues have been obtained from Staig's volumes on the Fabrician types in the Hunterian Collection at Glasgow (Vol. 1, 1931, Glasgow University Publication, XIX; Vol. 2, 1940, *Ibid.*, L), nor from Mrs. Doris Blake's account of some Coleoptera types of Fabricius (*Coleopterists' Bull.* 5, pp. 39-41, 1951). So, the extent of Rohr's travels in the Northern States is a mystery, but during those travels *sanguinipes* apparently was collected. In any event, the lectotype almost surely is from a North-eastern State, which is of importance if eastern and western populations of *M. sanguinipes* should be accorded separate status by future students.